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192.4
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Canada

90-06369/

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January 1989

Community Wastewater and Solid Waste Practices on Saskatchewan Indian Reserves:

An Environmental Evaluation

Report CP(EP) WNR 88/89-7

ABSTRACT

Community wastewater and solid waste practices on 76 Indian Reserves in Saskatchewan were reviewed to identify deficiencies and to recommend improvements. The evaluation was subjectively performed using available information, from site inspections or office files but without monitoring data. Twenty of the ninety wastewater facilities evaluated need to be improved. Five wastewater systems should be upgraded immediately. Forty-four wastewater facilities need to be monitored to verify their satisfactory compliance rating. Fifty-seven reserves need to improve some aspect of their solid waste management program. Although these solid waste deficiencies do not pose serious environmental or health concerns, such concerns may arise in the future if improvements are not made.

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1.0 INTRODUCTION

A Memorandum of Understanding was signed, in 1984, between the Departments of Health and Welfare, Environment, and Indian and Northern Affairs which defined respective departmental roles and responsibilities in providing water, wastewater and solid waste services on Indian Reserves. Under this agreement, Indian and Northern Affairs is responsible for the implementation, operation and maintenance of water, wastewater, and solid waste facilities and for the monitoring and surveillance of the wastewater facilities. Health and Welfare is responsible for the provision of health services, for performing the installation inspection of domestic sewage systems, and for performing a regular inspection program for solid waste facilities. Environment Canada's role is to develop and coordinate the implementation of federal environmental requirements on Indian Reserves and to review for environmental concerns the annual list of all water, wastewater, and solid waste projects proposed by Indian and Northern Affairs. Technical committees comprising representatives of the three Departments were established in each region to implement the principles of this agreement. In keeping with this agreement and departmental mandates, the three departments conducted a joint audit of community wastewater and solid waste practices on Saskatchewan Reserves.

There are 68 Indian Bands in Saskatchewan occupying 147 reserves. Not all reserves have facilities, some have only one

type of facility and others have more than one facility.

This report presents the environmental evaluations for 90 community wastewater facilities on 76 reserves. Solid waste practices on 74 reserves are also evaluated and reported. Sewage systems most applicable for Indian Reserves are discussed to guide Indian and Northern Affairs and Bands in their future selection of sewage systems, and recommendations are provided to improve community wastewater and solid waste practices.

2.0 COLLECTION AND EVALUATION OF DATA

Site inspections were conducted and historic files were reviewed, from July 1986 to July 1988, by Environmental Health Officers of Health and Welfare Canada and the Battlefords Indian Health Centre. Some of this information has been previously reported (Environment Canada and Health and Welfare Canada 1988). Data were evaluated by Environment Canada using the following guidelines: 1) Environment Canada's "Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments" (EPS 1-EC-76-1); 2) Indian and Northern Affairs' "Wastewater Collection, Treatment, and Disposal" (DRM/GM 10-7/41); and 3) Indian and Northern Affairs' "Solid Waste Collection and Disposal" (DRM/GM 10-7/42). The evaluation of community wastewater facilities was subjective and did not involve environmental sampling. Community wastewater facilities were defined as those that service public buildings, public buildings

and domiciles, or 20 or more houses.

3.0 RESULTS AND DISCUSSION

The main objectives of community sewage and solid waste systems are to collect, treat and dispose of liquid and solid wastes in a manner that protects public health and the environment. Most deficiencies identified in this report concern the treatment and disposal of sewage and the collection and disposal of garbage.

3.1 Wastewater Compliance

Ninety wastewater facilities were evaluated (Appendix 1). Twenty were not in compliance (Table 1). Of these, five facilities present grave health and/or safety problems which should be addressed immediately. These are at Chicken (Black Lake), Fond du Lac, James Smith, Mosquito and Chitek Lake Reserves. The remainder should be brought into compliance as soon as possible. Indian and Northern Affairs has indicated that most of the facilities not in compliance are currently under investigation.

Forty-four facilities were assigned conditional satisfactory ratings, denoted as "Yes*" in Appendix 1, because of potential problems. Generally, these facilities need to be monitored to ensure compliance. Lagoons which have no surface discharge

should be monitored to determine if ground water contamination is occurring. Surface discharges from lagoons should be monitored to ensure the discharges meet provincial effluent quality guidelines. Proper land disposal of holding tank sewage should be confirmed. Two operating mechanical plants need to be monitored regularly to confirm that they are in compliance with federal effluent guidelines. Specific details are listed in Appendix 1.

TABLE 1 WASTEWATER COMPLIANCE SUMMARY

System Type	Number of Facilities	Number Not In Compliance	Basis For Noncompliance
holding tank	11	1	-overflow
mechanical plant	5	3	-poor operation and maintenance
multi-cell lagoon	29	4	-seepage or outbreak -continuous discharge -poor operation -overloading
single cell lagoon	14	4	-surface release requires 2 cells -steep embankments -poor location
spray jet	16	4	-freeze-up -plugging
subsurface disposal	13	3	-freeze-up -plugging overflow
Unknown	2	1	
Total	90	20	

Spray jets were assigned a satisfactory rating where no problems were noted; however, their use for other than single dwellings on a parcel of land containing at least 16 hectares is not permitted under the supplement to the Saskatchewan Public Health Act (1977). In future, spray jets should only be installed for domestic systems.

3.2 Preferred Sewage Systems

Satisfactory sewage treatment is dependent on the level of operation and maintenance provided. To minimize future deficiencies of the type identified in Table 1, more consideration will have to be given to the selection of systems that are less troublesome to operate and maintain.

Past experiences have shown that mechanical plants have a high incidence of problems. As shown in Table 1, three of the five mechanical plants are out of compliance. The plant at La Plonge (Beauval) has experienced problems since it was first inspected in 1977, and the plant at Moosomin has been inoperable, since March 1988, due to the unavailability of parts. Mechanical plants may be suitable where high water table or other conditions restrict the use of less troublesome systems like lagoons and subsurface disposal.

Two cell lagoons and subsurface disposal systems are preferred over mechanical plants because of their simple

operation and low maintenance requirements. These favorable aspects are reflected, for instance, in the widespread application of these systems throughout Saskatchewan. Proposals for exfiltration lagoons should contain plans for monitoring, and these proposals should be submitted to Environment Canada and Health and Welfare Canada for review.

For some locations, the disposal of pretreated sewage to wetlands may be a viable alternative to other systems. Such situations may arise, for instance, due to favorable costs or the lack of alternatives because of technical considerations. Wetland treatment of sewage is an acceptable practice when properly designed and managed, and to help ensure this, all wetland proposals should be reviewed by Environment Canada and Health and Welfare Canada.

3.3 Solid Waste Compliance

Solid waste disposal practices on 74 of the 147 reserves were evaluated. Many of the remaining reserves were not inhabited. Only 18 of 74 reserves satisfied the basic requirements for a proper solid waste management program: 1) a garbage collection service; 2) proper location and operation of disposal sites; and 3) closure of abandoned sites. Disposal sites off seven of the reserves were not evaluated. A description of some of the more common problems is presented in Table 2. Details for each reserve are in Appendix 2. In addition to the problems noted in

Table 2, open burning and burial of garbage was observed at many houses. These practices should be discontinued as they can be unsafe and can undermine the establishment or operation of a community solid waste management program.

TABLE 2

SUMMARY OF SOME PROBLEMS WITH SOLID WASTE DISPOSAL ON RESERVES

Problem:	Number of Reserves
1 - Garbage collection not operational or unknown	31
2 - Poorly located or operated disposal sites	25
3 - Inactive sites improperly closed or status unknown	36
4 - No defined disposal site	6

In summary, solid waste problems on Saskatchewan Reserves are generally a litter control problem. Solid waste practices should be immediately improved before serious environmental and health concerns arise or before new developments exacerbate the situation.

4.0 RECOMMENDATIONS

Indian and Northern Affairs should implement the following recommendations to improve community sewage and solid waste practices on the reserves:

1) Immediately upgrade sewage treatment facilities at Chicken (Black Lake), Fond du lac, James Smith, Mosquito and Chitek Lake Reserves;

2) Upgrade the remaining sewage facilities not in compliance with the guidelines;

3) Monitor the 44 sewage facilities that require monitoring and bring into compliance any found deficient.

4) Encourage the use of low maintenance sewage systems, such as two-cell lagoons and sewage mounds, where conditions permit;

5) Actively assist in the establishment of regular garbage collection services and in the closure of abandoned disposal

sites;

6) Actively participate in the establishment of new disposal sites as required;

7) Provide advice to Bands that seek technical advice concerning sewage and solid waste improvements;

8) Submit annual inspection reports to Environment Canada and Health and Welfare Canada on sewage and solid waste practices for all the reserves, as specified in the Memo of Understanding (1984); and

9) Submit an annual list of proposed water, wastewater and solid waste projects, as specified in the Memo of Understanding (1984), to Environment Canada for its review for environmental concerns.

5.0 REFERENCES

Environment Canada. 1976. "Guidelines for effluent quality and wastewater treatment at federal establishments." Report No. EPS 1-EC-76-1, 17 p.

Environment Canada and Health and Welfare Canada. 1988. "Community wastewater and solid waste management practices on Saskatchewan Indian Reserves: an environmental compliance evaluation." Report No. CP(EP) WNR 88/89-2, 15 p.

Indian and Northern Affairs Canada. 1984. "Solid waste collection and disposal." Report No. DRM/GM 10-7/42, 23 p.

Indian and Northern Affairs Canada. 1984. "Wastewater collection, treatment, and disposal." Report No. DRM/GM 10-7/41, 80 p.

APPENDIX 1

AN EVALUATION OF WASTEWATER FACILITIES

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Fort Qu'Appelle Zone of Medical Services					
Carry the Kettle	1 cell lagoon	Band Office	No	Yes*	-Check for seepage
	1 cell lagoon	Kindergarten	No	No	-Lagoon too close to kindergarten (30 m) -Guidelines require a minimum setback distance of 60 m
Cote	1 cell lagoon	30 Village Homes	Unknown	Yes*	-Lagoon overgrown and unattended -Monitor system
Cowessess	2 cell lagoon	School, Village	Yes	Yes*	-Monitor system
Day Star	1 cell lagoon	Band Office	No	No	-Lagoon 20 m from well -Check for seepage
Fishing Lake	Spray jet	Band Office, Health Clinic	Yes	Yes	
	Holding tank-land disposal	Band Hall, Band Home, Care Bldg.	Yes	Yes*	-Ensure land disposal is not a problem
Gordon	Spray jet	Health Clinic	Yes	No	-Jet freezes, causes back-up into basement
	Spray jet	Community Complex	Yes	Yes	
Kahkewistahaw	2 cell lagoon	Band Office, 15 Homes, Arena, Store	Unknown	Yes*	-Monitor system
Keeseekoose	2 cell lagoon	20-30 Homes	Unknown	Yes*	-Monitor system
Key	Holding tank-land disposal	Band Office	Yes	Yes*	-Ensure land disposal is not a problem
Kinistino	Spray jet	Band Office	Yes	Yes	
	Spray jet	Health Clinic	Yes	No	-Jet freezes
	Spray jet	School	Yes	Yes	
Last Mountain Lake	2 cell lagoon	Campground and Surrounding area	No	Yes	-2nd cell dry -Locked gate needed to restrict unauthorized use
Little Black Bear	Spray jet	Band Office	Yes	Yes	-New system
Muscowpetung	1 cell lagoon	Band Office	No	Yes*	-Check for seepage
Muskowekwan	1 cell lagoon	Band Office	No	Yes*	-Check for seepage
	1 cell lagoon	Community Hall & Private Res.	No	Yes*	-Check for seepage
Nikaneet	Holding tanks-land disposal	Band Office/ Clinic	Yes	Yes*	-Ensure land disposal is not a problem
Nut Lake	4 Holding tanks-land disposal	Band Office, Band Hall, Kindergarten, Health Clinic	Yes	Yes*	-Ensure land disposal is not a problem

* Confirm compliance status (see text)

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Fort Qu'Appelle Zone of Medical Services (Continued)					
Ochapowace	Subsurface disposal	Clinic	Yes	No	-Field freezes in winter
	Holding tanks	Band Hall	Unknown	Yes*	-Monitor system
Okanese	Holding tank-land disposal	Band Office	Yes	Yes*	-Ensure land disposal is not a problem
Pasqua	Spray jet	School	Yes	Yes	
	Spray jet	Band Hall, Health Clinic	Yes	No	-Jet freezes
Peepeekisis	Subsurface disposal	Clinic	No	Yes	-System recently installed to service new clinic
	Spray jet	School	Yes	No	-Jet is too close to school (30 m)
	Subsurface disposal	Adult Education Centre	No	Yes	
Piapot	Holding tank-land disposal or lagoon	Band Office	Yes	Yes*	-Ensure land disposal is not a problem
	Subsurface disposal	School	No	Yes	
	1 cell lagoon	Band Office	No	Yes*	-Receives holding tank effluent -Check for seepage
Poorman	-	-	-	-	-No system reported
Sakimay	2 cell lagoon	Band Office, Clinic, School, Arena, 11 Homes, Community Centre	No	Yes*	-Second cell dry -Check for seepage
Standing Buffalo	3 Holding tanks	Store, School, Band Office	-	Yes	-Sewage discharged to rural municipal lagoon
Star Blanket	Spray jet	Band Office	Yes	Yes	
White Bear	Subsurface disposal	Kindergarten, Clinic	No	Yes	
	Subsurface disposal	Adult Education Centre	No	Yes	
	4 Holding tanks-land disposal	2 Churches, Golf Clubhouse	Yes	Yes*	-Ensure land disposal is not a problem
Wood Mountain	-	-	-	-	-No system reported
Meadow Lake Zone of Medical Services					
Big C	2 cell lagoon	School, Band Office, Clinic, 2 Trailers, Homes, 2 Teacherages, Firehall	No	Yes*	-Second cell nearly dry -Check for seepage
Buffalo River	2 cell lagoon	35 Homes, Clinic, School, Cafe	Unknown	Yes*	-Monitor system

* Confirm compliance status (see text)

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Meadow Lake Zone of Medical Services (Continued)					
Canoe Lake	2 cell lagoon	School, Clinic, 46 Homes, 4 Teacherages	No	Yes*	-Second cell dry -Check for seepage
Flying Dust	-	-	-	-	-No system reported
Island Lake	2 cell lagoon	School, Arena, 5 Teacherages, Firehall	Unknown	Yes*	-Fence and road need repair -Monitor system
Joseph Bighead	2 cell lagoon	School, Band Office, Laundromat, Clinic, 1 Home, 3 Trailers, 2 Group Homes,	No	Yes*	-Fence needs repair -Check for seepage
La Plonge (Beauval)	Extended Aeration	Students Residence, 10 Residences	Yes	No	-Periodic overloads occur -Noncompliance since 1977 -Monitor effluent quality
La Plonge (Patuanak)	3 cell lagoon	45 Homes, School, Clinic, Band office, 8 Residences	Yes	No	-Violates annual retention criteria of guidelines because of continuous discharge -Monitor effluent quality
Makwa Sahgaiehcan	-	-	-	-	-No system reported
Poundmaker	2 cell lined lagoon	4 Teacherages, 2 Homes, School, Admin. Bldg.	Unknown	Yes*	-Monitor system
Thunderchild	2 cell lagoon	Schools, Band Office, Clinic, 20 Homes, 8 Teacherages	Unknown	Yes*	-Monitor system
Turnor Lake	3 cell lagoon	School, Clinic, 30 Homes	Yes	Yes	
Waterhen	2 cell lagoon	School, Arena, Band Office, Clinic, 4 Residents, 2 Trailers	No	No	-Beavers in lagoon
Prince Albert Zone of Medical Services					
Beardy's (Duck Lake Student Residence)	Subsurface disposal	School, Residence, Teacherage	No	Yes	
Big River	2 cell lagoon	School, Arena, Teacherages, Clinic	Unknown	Yes*	-Monitor system
Chicken (Black Lake)	Subsurface disposal	Band Office, Clinic, Teacherages	Yes	No	-Tile field backs up because of debris placed in man-holes. Violation of provincial regulation as it is well within 150 m of lake. Vehicle traffic over tile may have damaged system

* Confirm compliance status (see text)

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Prince Albert Zone of Medical Services (continued)					
Chitek Lake	1 cell lagoon	Clinic, Band Office, School, Teacherages	Yes	No	-Vertical berms and no fencing are a safety hazard -Discharge onto cropland should be monitored
Cumberland	2 cell lined lagoon	Village Area, School, Homes, Band Office	Unknown	Yes*	-Excessive vegetation growth on berms -Monitor system
	2 cell lined lagoon	Portage Area, Homes	Yes	Yes*	-Monitor system
Grandmother's Bay	Unknown	School, Teacherage, Laundromat	Yes	No	-Unmonitored pipe discharge into muskeg near shoreline -Monitor system/lake
Fond du lac	2 cell lagoon	Band Office, Clinic, Teacherages, R.C.M.P. Bldg.	Yes	No	-Berm failures have allowed the release of untreated sewage into the lake. -Berm deterioration is from skidoos and no maintenance -monitor system
James Smith	Holding tanks	Band Office, Nursery School, Clinic, Arena	-	No	-Arena tanks often overflow when hockey tournaments are held -Sewage disposed at lagoon
	3 cell lagoon	High school, Above Facilities	Unknown	Yes*	-Lagoon constructed in 1986 -Monitor system
Hatchet Lake	Subsurface disposal	Clinic	No	Yes	-System installed in 1986
Lac la Ronge	Holding tanks	Band Office, Band Hall, Clinic	-	Yes	-Sewage disposed at La Ronge lagoon
Little Red River	-	-	-	-	-No system reported
Mistawasis	1 cell lagoon	Band Office, School, Clinic, 30 Homes, Arena	Unknown	Yes*	-Guidelines require two cells -Monitor system
Moose Woods	Subsurface disposal	Band Office/ Hall	No	Yes	-New system
	Spray jet	-	Yes	Yes	-Disposes water treatment backwash
Morin Lake	-	-	-	-	-No system reported
Muskeg	Spray jet	School Medical Services Clinic, Band Office	Yes	Yes	
Muskoday	Spray Jet	Band Office	Yes	Yes	
One Arrow	2 cell lagoon	School, Clinic,	Unknown	Yes*	-Lagoon became operational in November, 1987 -Monitor system
Prince Albert Student Residence	-	-	-	-	-Served by the City of Prince Albert
Pelican Narrows	RBC	School, Teacherage, Band Office	Yes	Yes*	-Chlorine residuals in effluent measured daily -Monitor system

* Confirm compliance status (see text)

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Prince Albert Zone of Medical Services (continued)					
Red Earth	RBC	School, Teacherages, R.C.M.P., Clinic, 2 Homes, Band Office	Yes	Yes*	-RBC operation appears satisfactory -Monitor system
	2 cell lagoon	School, Education Bldg.	Unknown	Yes*	-Vegetation growth in both cells -Monitor system
Sandy Lake	RBC	School, Arena, Office, Clinic, 17 Homes	Yes	No	-RBC needs maintenance -Monitor system
Shoal Lake	1 cell lagoon	School, Teacherages, Clinic	Unknown	Yes*	-Condition of gate and fence is poor -Monitor system
Southend	-	-	-	-	-No system reported
Stanley	-	-	-	-	-No system reported
Sturgeon Lake	2 cell lagoon	School, Clinic, Band Office	Unknown	Yes*	-Monitor system
Sturgeon Weir	-	-	-	-	-No system reported
Sucker River	Subsurface disposal	School	No	Yes	
Wahpeton	2 cell lagoon	Band Office Clinic, 6 Homes, School	Unknown	Yes*	-Monitor system
Witchekan Lake	Spray jet	Band Office, Clinic	Yes	Yes	
Battlefords Indian Health Centre Communities					
Little Pine	2 cell unlined lagoon	School, Clinic 20 Homes	No	Yes*	-Lagoon constructed one year ago -System oversized -2nd cell dry; check for seepag
Moosomin	RBC - 1 cell lagoon	Band Office, School, Home	No	No	-RBC out of operation since March, 1988
Mosquito	1 cell lagoon	Band Office	No	No	-Severe bank erosion -Steep banks pose danger to passers-by -Cut berm vegetation
	2 cell lagoon	School, Clinic, Teacherages, 2 Homes	Unknown	Yes*	-Monitor system
Onion Lake	2 cell lagoon	School, Band Office, Clinic, 25-30 Homes	Unknown	No	-Sludge mounds in 1st cell -Odors and sewage color indicate overloading -Monitor system
	Subsurface disposal	School, Nursery, Kindergarten Home	No	Yes	
	Unknown	Roman Catholic School	Yes	Yes*	-Sewage flows to slough -Pretreatment unknown -Pretreat sewage if necessary
Red Pheasant	2 cell lagoon	School, Teacherages	Unknown	Yes*	-Cut berm vegetation -Monitor system
	1 cell lagoon	Alcohol Rehabilitation Centre, Clinic	Unknown	Yes*	-Completed in fall of 1987 -Cell oversized -Monitor system

* Confirm compliance status (see text)

Reserve	System Type	Facilities Served	Surface Discharge	Satisfactory Compliance Status	Comments
Battlefords Indian Health Centre Communities (Continued)					
Saulteaux	1 cell lagoon	School, Band Office, Band Hall	No	Yes*	-Cell oversized -Clean cell inlet -Check for seepage
Sweetgrass	Subsurface disposal	Clinic, Store/Poolroom, Laundromat, Carwash Bay	Unknown	No	-Plugging problem in system -Septic tank serves as a holding tank which periodically overflows
	Spray Jet?	Band Office	Yes	Yes	-No problems for 16 years -Confirm spray jet exists
	2 cell lagoon	School, 3 homes	No	Yes*	-2nd cell dry -Check for seepage

* Confirm compliance status (see text)

APPENDIX 2

AN EVALUATION OF SOLID WASTE PRACTICES

Reserve	Regular Community Collection Service	Adequate Site Operation & Location	Old Sites Adequately Covered	Comments
Fort Qu'Appelle Zone of Medical Services				
Carry the Kettle	No	-[a]	-[a]	-No community disposal site
Cote	Yes	No	No	-All-weather road needed -Active site untidy
Cowessess	No	No	No	-Active site untidy
Day Star	No	Yes	Yes	-Fence needed
Fishing Lake	No	Yes	Yes	-Fence needed
Gordon	Yes	Yes	Yes	-Fence needed
Kahkawisthaw	No	Yes	Yes	-All-weather road needed
Keeseekoose	Yes	No	Yes	-All-weather road needed -Active site untidy
Key	No	No	Yes	-All-weather road needed -Active site 90 m from lake -Site untidy -Site full; new site needed
Kinistino	Yes	Yes	Yes	-Fence needed
Kinookimaw Beach	No	Yes	Yes	
Little Black Bear	No	-[a]	-[a]	-No community disposal site
Muscowpetung	No	-[a]	-[a]	-No community disposal site
Muskowehan	Yes	Yes	Yes	-Fence needed
Nikaneet	No	Yes	Yes	
Nut Lake	Yes	Yes	Yes	
Ochapowace	No	-[a]	-[a]	-No community disposal site
Okanese	No	-[a]	-[a]	-No community disposal site
Pasqua	No	No	Yes	-Active site untidy
Peepeekisis	No	No	Yes	-Two active sites untidy and too small -Improve one site and close the other site
Piapot	No	No	No	-All-weather road needed -Active site untidy
Poorman	No	Yes	Yes	-Fence needed
Standing Buffalo	No	Yes	Yes	
Star Blanket	No	Yes	Yes	-Bulky objects should be be segregated from refuse
White Bear	No	No	Yes	-Three untidy, active sites -All-weather road needed -Improve one active site and close the other sites
Wood Mountain	No	No	-[a]	-Trenches needed
Meadow Lake Zone of Medical Services				
Big C	Yes	Yes	Yes	
Buffalo River	Yes	Yes	Yes	-New site
Canoe Lake	Yes	Yes	Yes	
English River	Yes	Yes	Yes	

[a] Not reported or not applicable

Reserve	Regular Community Collection Service	Adequate Site Operation & Location	Old Sites Adequately Covered	Comments
Meadow Lake Zone of Medical Services (Continued)				
Flying Dust	Yes	No	Yes	-Not all garbage in trench -New trench needed
Island Lake	Yes	Yes	Yes	
Joseph Bighead	Yes	Yes	Yes	
La Plonge (Beauval)	Yes	Yes	Yes	-New trench needed
Makwa Sahgaiehcan	Yes	Yes	Yes	-Road needs grading Trench not always used
	Yes	Yes	Yes	-Site near #26 highway
Thunderchild	Yes	Yes	No	-Access road requires improving
Turnor Lake	Yes	Yes	Yes	
Waterhen	Yes	Yes	Yes	
Prince Albert Zone of Medical Services				
Beardy's (Duck Lake Student Residence)	Yes	Yes	Yes	
Big River	Yes	No	No	-Ban open dumping
Chicken (Black Lake)	Yes	No	No	-All-weather road needed -Ban open dumping
Cumberland	-[a]	-[a]	-[a]	-An off-reserve site is used
Fond du lac	Yes	No	-[a]	-Active site 100 m from lake
Grandmother's Bay	Yes	-[a]	-[a]	-Site location off the reserve (Socker River)
Hatchet Lake	-[a]	Yes	Yes	-Fence needed
James Smith	Yes	No	No	-Ban opening dumping
Lac la Ronge	Yes	Yes	-[a]	
Little Red R.	-[a]	-[a]	-[a]	-No community site reported
Mistawasis	-[a]	Yes	-[a]	
Montreal Lake	Yes	Yes	-[a]	
Morin Lake	-[a]	Yes	-[a]	
Moose Woods	Yes	Yes	No	-All-weather road needed -Cover old sites
Muskeg Lake	-[a]	No	-[a]	-Active site full
Muskoday	Yes	Yes	Yes	
One Arrow	-[a]	Yes	-[a]	
Chitek Lake	Yes	No	Yes	-All-weather road needed -Ban open dumping
Pelican Narrows	Yes	-[a]	Yes	-Site location off the reserve (Pelican Narrows Townsite)
Red Earth	Yes	No	Yes	-Trenches needed -Rat problem
Sandy Lake	Yes	No	-[a]	-Four active sites -Improve one site and close other 3 sites

[a] Not reported or not applicable

Reserve	Regular Community Collection Service	Adequate Site Operation & Location	Old Sites Adequately Covered	Comments
Prince Albert Zone of Medical Services (Continued)				
Shoal Lake	Yes	No	No	-All-weather road needed -Active site untidy
Southend	.[a]	Yes	.[a]	
Stanley	.[a]	Yes	.[a]	
Sturgeon Lake	Yes	No	No	-Site located only 60 m from homes -Fence needed to control litter -Site not properly maintained
Sturgeon Weir	Yes	.[a]	.[a]	-Site location off reserve (Community of Sturgeon Landing)
Sucker River	Yes	Yes	.[a]	-Fence needed
Wahpeton	Yes	.[a]	.[a]	-Reserve uses Prince Albert landfill
Witchekan	Yes	.[a]	.[a]	-Reserve uses Prince Albert landfill
Battlefords Indian Health Centre Communities				
Little Pine	Yes	Yes	Yes	-Fence needed
Moosomin	Yes	No	Yes	-Site untidy -Fence needed
Mosquito	No	No	No	-Cover old sites -Not all garbage in trench
Onion Lake	Yes	No	Yes	-Four active sites -Improve one existing site and close other 3 sites
Red Pheasant	Yes	No	No	-Three active sites -Improve one site and close the other two sites
Saulteaux	.[a]	.[a]	.[a]	-An off reserve site is used (Town of Cochin)
Sweetgrass	Yes	No	Yes	-Fence needed -Site untidy

[a] Not reported or not applicable